

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A process for the heterogeneously catalyzed gas-phase partial oxidation of acrolein to acrylic acid over a catalytically active multimetal oxide material which contains the elements Mo and V, at least one of the elements Te and Sb and at least one of the elements from the group consisting of Nb, Ta, W, Ce and Ti and whose X-ray diffraction pattern has no reflections with the peak position $2\theta = 50.0 \pm 0.3^\circ$ but has reflections h, i and k whose peaks are at the diffraction angles $(2\theta) 22.2 \pm 0.5^\circ$ (h), $27.3 \pm 0.5^\circ$ (i) and $28.2 \pm 0.5^\circ$ (k),

- the reflection h being the one with the strongest intensity within the X-ray diffraction pattern and having a full width at half height of not more than 0.5° ,
- the intensity P_i of the reflection i and the intensity P_k of the reflection k fulfilling the relationship $0.65 \leq R \leq 0.85$, where R is the intensity ratio defined by the formula

$$R = P_i / (P_i + P_k)$$

and

- the full width at half height of the reflection i and of the reflection k being in each case $\leq 1^\circ$,

wherein the catalytically active multimetal oxide material is one of the stoichiometry (I)



where

M^1 is at least one of the elements from the group consisting of Te and Sb;

M^2 is at least one of the elements from the group consisting of Nb, Ti, W, Ta and Ce;

M^3 is at least one of the elements from the group consisting of Pb, Ni, Co, Bi, Pd, Ag, Pt, Cu, Au, Ga, Zn, Sn, In, Re, Ir, Sm, Sc, Y, Pr, Nd and Tb;

a = from 0.01 to 1,

b = from > 0 to 1,

c = from > 0 to 1,

d = from > 0 to 0.5 and

n is a number which is determined by the valency and frequency of the elements other than oxygen in (I).

Claim 2 (Currently Amended): [[A]] The process as claimed in claim 1, wherein $0.67 \leq R \leq 0.75$.

Claim 3 (Currently Amended): [[A]] The process as claimed in claim 1, wherein $0.69 \leq R \leq 0.75$.

Claim 4 (Currently Amended): [[A]] The process as claimed in claim 1, wherein $0.71 \leq R \leq 0.74$.

Claim 5 (Currently Amended): [[A]] The process as claimed in claim 1, wherein $R = 0.72$.

Claim 6 (Currently Amended): [[A]] The process as claimed in any of claims 1 to 5, wherein the specific surface area of the catalytically active multimetal oxide material (I) is from 11 to $40 \text{ m}^2/\text{g}$.

Claim 7 (Currently Amended): [[A]] The process as claimed in any of claims 1 to 6
claim 1, wherein the X-ray diffraction pattern of the catalytically active multimetal oxide
material (I) has further reflections having their peak position at the following diffraction
angles 2θ :

$9.0 \pm 0.4^\circ$ (l),

$6.7 \pm 0.4^\circ$ (o) and

$7.9 \pm 0.4^\circ$ (p).

Claim 8 (Currently Amended): [[A]] The process as claimed in claim 7, wherein the
X-ray diffraction pattern of the catalytically active multimetal oxide material (I) has further
reflections with their peak position at the following diffraction angles 2θ :

$29.2 \pm [[0,4^\circ]]$ 0.4° (m) and

$35.4 \pm 0.4^\circ$ (n).

Claim 9 (Currently Amended): [[A]] The process as claimed in claim 8, wherein the
reflections h, i, l, m, n, o, p and q have the following intensities on the same intensity scale:

h = 100,

i = from 5 to 95,

l = from 1 to 30,

m = from 1 to 40,

n = from 1 to 40,

o = from 1 to 30,

p = from 1 to 30 and

q = from 5 to 60.

Claim 10 (Currently Amended): [[A]] ~~The process as claimed in any of claims 1 to 9~~
claim 1, wherein a = from 0.05 to 0.6.

Claim 11 (Currently Amended): [[A]] ~~The process as claimed in any of claims 1 to 10~~
claim 1, wherein b = from 0.01 to 1.

Claim 12 (Currently Amended): [[A]] ~~The process as claimed in any of claims 1 to 11~~
claim 1, wherein c = from 0.01 to 1.

Claim 13 (Currently Amended): [[A]] ~~The process as claimed in any of claims 1 to 12~~
claim 1, wherein d = from 0.0005 to 0.5.

Claim 14 (Currently Amended): [[A]] ~~The process as claimed in any of claims 1 to 13~~
claim 1, wherein

a = from 0.1 to 0.6,

b = from 0.1 to 0.5,

c = from 0.1 to 0.5 and

d = from 0.001 to 0.5.

Claim 15 (Currently Amended): [[A]] ~~The process as claimed in any of claims 1 to 14~~
claim 1, wherein at least 50 mol% of M², based on its total amount, is Nb.

Claim 16 (Currently Amended): [[A]] ~~The process as claimed in any of claims 1 to 14~~
claim 1, wherein at least 75 mol% of M², based on its total amount, is Nb.

Claim 17 (Currently Amended): [[A]] The process as claimed in any of claims 1 to 14 claim 1, wherein M² is exclusively Nb.

Claim 18 (Currently Amended): [[A]] The process as claimed in any of claims 1 to 17 claim 1, wherein M³ is at least one element from the group consisting of Ni, Co, Bi, Pd, Ag, Au, Pb and Ga.

Claim 19 (Currently Amended): [[A]] The process as claimed in any of claims 1 to 17 claim 1, wherein M³ is at least one element from the group consisting of Ni, Co, Pd and Bi.

Claim 20 (Currently Amended): [[A]] The process as claimed in any of claims 1 to 17 claim 1, wherein M¹ is Te, M² is Nb and M³ is at least one element from the group consisting of Ni, Co and Pd.

Claim 21 (Currently Amended): [[A]] The process as claimed in claim 1, wherein the multimetal oxide material (I) is contained in a total multimetal oxide material whose X-ray diffraction pattern has no reflection with the peak position $2\theta = 50.0 \pm 0.3^\circ$.

Claim 22 (Currently Amended): [[A]] The process as claimed in claim 21, wherein the multimetal oxide material (I) is present in the total multimetal oxide material in a form diluted with at least one finely divided material from the group consisting of silica, titanium dioxide, alumina, zirconium oxide and niobium oxide.

Claim 23 (Currently Amended): [[A]] The process as claimed in claim 22, wherein the total multimetal oxide material contains $\geq 80\%$ by weight of multimetal oxide material (I) and the X-ray diffraction pattern of the total multimetal oxide material has a reflection with the peak position $2\theta = 50.0 \pm 0.3^\circ$.

Claim 24 (Currently Amended): [[A]] The process as claimed in claim 22, wherein R ≥ 0.65 and ≤ 0.90 is fulfilled for the X-ray diffraction pattern of the total multimetal oxide material.

Claim 25 (Currently Amended): [[A]] The process as claimed in any of claims 1 to 24 claim 1, wherein the heterogeneously catalyzed gas-phase partial oxidation of acrolein is effected in the presence of propane and/or propene.

Claim 26 (Currently Amended): [[A]] The process as claimed in any of claims 1 to 25 claim 1, which is carried out in a tube-bundle reactor.

Claim 27 (Currently Amended): [[A]] The process as claimed in any of claims 1 to 26 claim 1, wherein the catalytically active multimetal oxide material (I) is a component of a coated catalyst.